

I-40/US 93 West Kingman System Interchange Public Information Meeting

Thursday, September 26, 2013

ADOT Project No. 040 MO 048 H799301L | Federal Aid No. NH-040-A(212)N



Welcome and Agenda

- ▶ Title VI
- ▶ Introduction of the Study Team
- ▶ Purpose and Need for the Study
- ▶ Development Process
- ▶ Review Previous Progress & Selection of Candidate Alignments
- ▶ Evaluation of the Candidate Alignments
- ▶ Q&A Session

Title VI

Title VI is a federal law that prohibits discrimination on the basis of race, color, or national origin in Federally assisted programs & activities.

The law specifically states:

- ▶ “No person in the United States shall on the ground of race, color, or national origin be excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance.” (42 USC 200d)

ADOT’s Title VI Policy:

- ▶ Assures that no person shall on the grounds of race, color, national origin, gender, age, or disability be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any ADOT sponsored program or activity.

Study Team

- ▶ Mike Kondelis, ADOT Kingman District Engineer
- ▶ Adam McGuire, ADOT Project Manager
- ▶ Ralph Ellis, ADOT Environmental Planning Group
- ▶ Ammon Heier, Federal Highway Administration (FHWA)
- ▶ Rebecca Yedlin, FHWA Environmental Coordinator
- ▶ John Reid, Bureau of Land Management
- ▶ Michele Beggs, ADOT Communications
- ▶ Darrell Truitt, Engineering Consultant
- ▶ Patricia McCabe, Environmental Consultant

Need

- ▶ Lack of critical regional connection between I-40 and I-15
- ▶ Traffic congestion and back ups onto westbound I-40 and southbound US 93
- ▶ Operational concerns in both directions on I-40
- ▶ Additional considerations include continuing development within the area and increasing right-of-way costs
- ▶ One of three Arizona “bottleneck” locations along US 93 between Phoenix and Las Vegas

Purpose

- ▶ Evaluate a high-speed facility connection between I-40 and US 93
- ▶ Relieve existing and future congestion
- ▶ Enhance regional traffic flow
- ▶ Promote local access
- ▶ Maintain a safe interchange

Development Process



Study Area

Existing Roadway Network

- ▶ I-40, US 93, Local Roads

Land Ownership

- ▶ Public (BLM) Land, Private Land, State Trust Land

Drainage Features

- ▶ Multiple washes and springs, FEMA floodplains

Existing Utilities

- ▶ Numerous facilities were identified, primarily near the Beale Street TI

Environmental Features

- ▶ Properties afforded protection (Section 4(f)), HazMat sites, cultural sites



Initial Corridors Presented

Ten conceptual corridors plus a “No Build” alternative were evaluated with respect to the study area features outlined on previous slides.

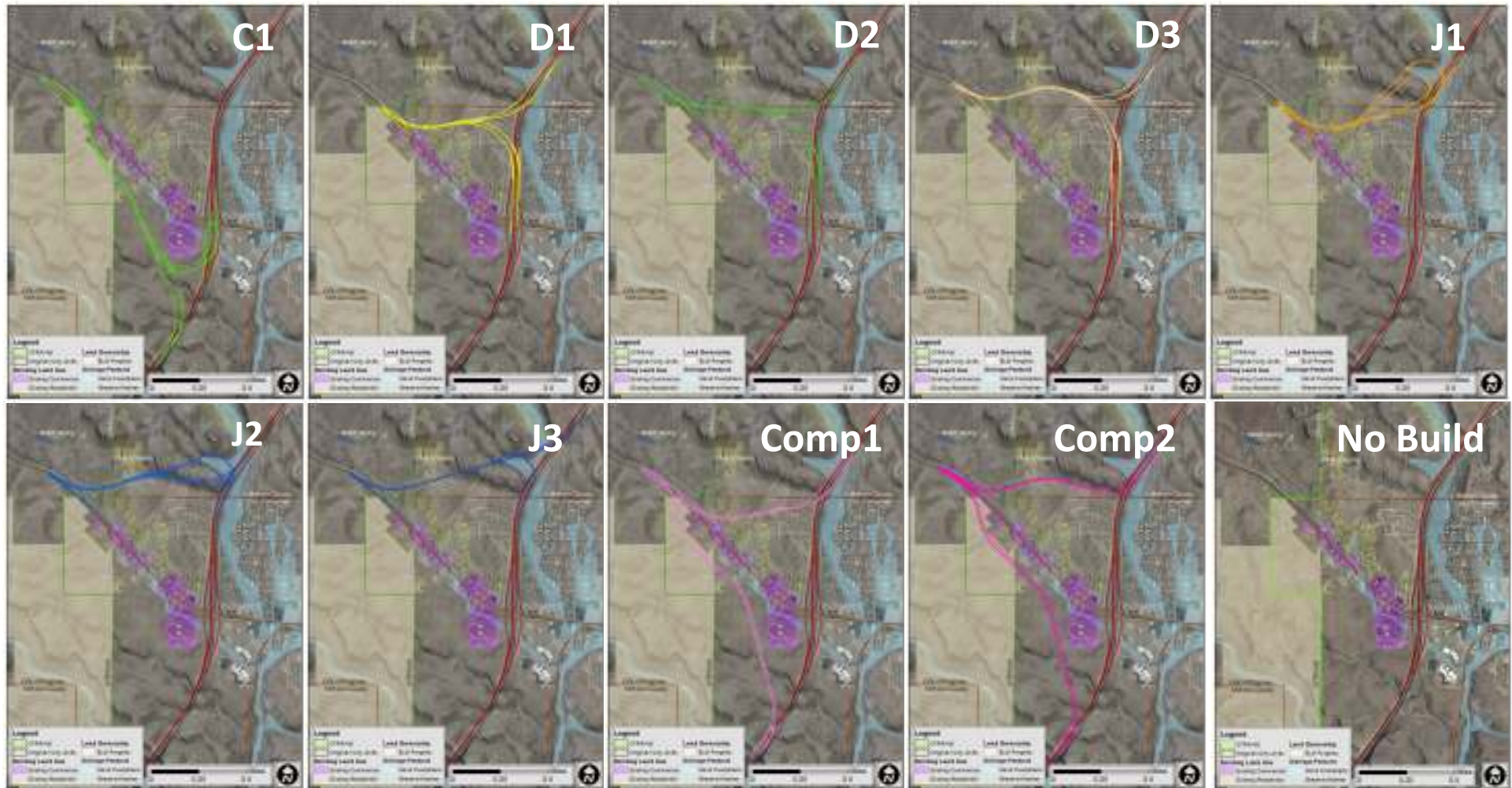


Most Favorable Corridors

- ▶ Corridors C, D, I, and J were recommended for further evaluation
- ▶ A variety of conceptual alignments were developed within the recommended corridors
- ▶ The top nine candidate alignment alternatives were further refined and evaluated



Conceptual Alignment Alternatives



Candidate Alignment Alternatives

The following candidate alignments were recommended for a more detailed study:

Alignment Alternative D1

- Shortest, most cost effective alternative
- Minimize impacts to identified cultural resources and CFRA



Alignment Alternative D3

- Locates roadway behind hills & reduces impacts to existing residential properties
- Minor CFRA impacts



Alignment Alternative J3

- Eliminates need for existing TI modifications
- Requires least amount of new right-of-way
- Follows D3 alignment



Alignment Alternative D1

- ▶ Minimizes CFRA/4(f) impacts
- ▶ Minimizes impacts to identified cultural resources
- ▶ Removes majority of traffic from existing Beale St. TI
- ▶ Follows approximate boundary of urbanized/undeveloped areas
- ▶ Some impacts to existing residential and commercial properties



Alignment Alternative D3

- ▶ Places roadway behind hills - reduces residential and visual impacts
- ▶ Removes majority of traffic from existing Beale St. TI
- ▶ Follows approximate boundary of urbanized/undeveloped areas
- ▶ Minor CFRA/4(f) impacts
- ▶ Minor impacts to identified cultural resources



Alignment Alternative J3

- ▶ Shifts new system TI further from existing Beale St. TI
- ▶ Follows D3 alignment - reduces residential and visual impacts
- ▶ Removes majority of traffic from existing Beale St. TI
- ▶ Minor CFRA/4(f) impacts
- ▶ Lower design speeds on LA-to-Vegas movements
- ▶ Greater impacts to terrain/cliffs



Alignment Evaluation Process

- ▶ The evaluation criteria were grouped into four general categories:
 - 1) Environmental Impacts, 2) Community Impacts, 3) Construction Costs, 4) Engineering Criteria.
- ▶ Criteria were assigned a weight of 1 or 2 to emphasize factors more critical to the decision process.
- ▶ Alternatives are assigned a relative value for each criterion.
 - Good = 2 pts.
 - Fair = 1 pt.
 - Poor = 0 pts.
- ▶ Cumulative scores calculated by first multiplying the relative value for each measurement by the weight of the evaluation criterion to obtain a weighted relative value. The weighed relative values are then tallied for each alternative to arrive at an overall score.

Evaluation Criterion Weights

Environmental Impacts

- Section 4(f) Lands [2]
- Section 6(f) Lands [1]
- Cultural Resources Impacts[2]
- Biological Resource Impacts [1]
- 404 Impacts [1]

Community Impacts

- Total Right-of-way [1]
- Residential Structures Impacted [1]
- Noise Impacts [1]
- Visual Impacts [1]

Construction Costs

- Construction cost (Phase 1) [2]
- Construction cost (Phase 2) [1]

Engineering Criteria

- 2040 Interchange LOS [2]
- Ramp design speed [1]
- Amount of steep grades [1]
- Maintenance of
Traffic/Constructability [2]
- Lane miles/Future
maintenance [1]

Weight = [1]

Alignment Evaluation Matrix

Evaluation Criteria	D1	D3	J3
Section 4(f) Lands – Weight 2	✓✓	✓✓	✓✓
Section 6(f) Lands – Weight 1	✓	✓	✓
Cultural Resource Impacts – Weight 2	✓✓	✓✓	✓✓
Biological Resource Impacts – Weight 1	✓	✓	✓
404 Wash Impacts – Weight 1	✓	✓	✓
Total Right-of-way – Weight 1	✓✓	✓✓	✓✓
Residential Structures Impacted – Weight 1	✓	✓	✓
Noise Impacts – Weight 1	✓	✓	✓
Visual Impacts – Weight 1	✓	✓	✓
Construction Cost (Phase 1) – Weight 2	✓✓	✓✓	✓✓
Construction Cost (Phase 2) – Weight 1	✓	✓	✓
2040 Level of Service – Weight 2	✓✓	✓✓	✓✓
Ramp Design Speed – Weight 1	✓	✓	✓
Steep Grades – Weight 1	✓	✓	✓
Maintenance of Traffic/Constructability - Weight 2	✓✓	✓✓	✓✓
Lane miles/Future maintenance - Weight 1	✓	✓	✓
Cumulative Score	21	24	21
Most Favorable Alignment	No	YES	No

Rating	Symbol	Score
Good	✓✓	4
	✓	2
Fair	✓✓	2
	✓	1
Poor	✓✓	0
	✓	0

General Observations

Alignment Alternative D3 was considered the most favorable for the new West Kingman System TI

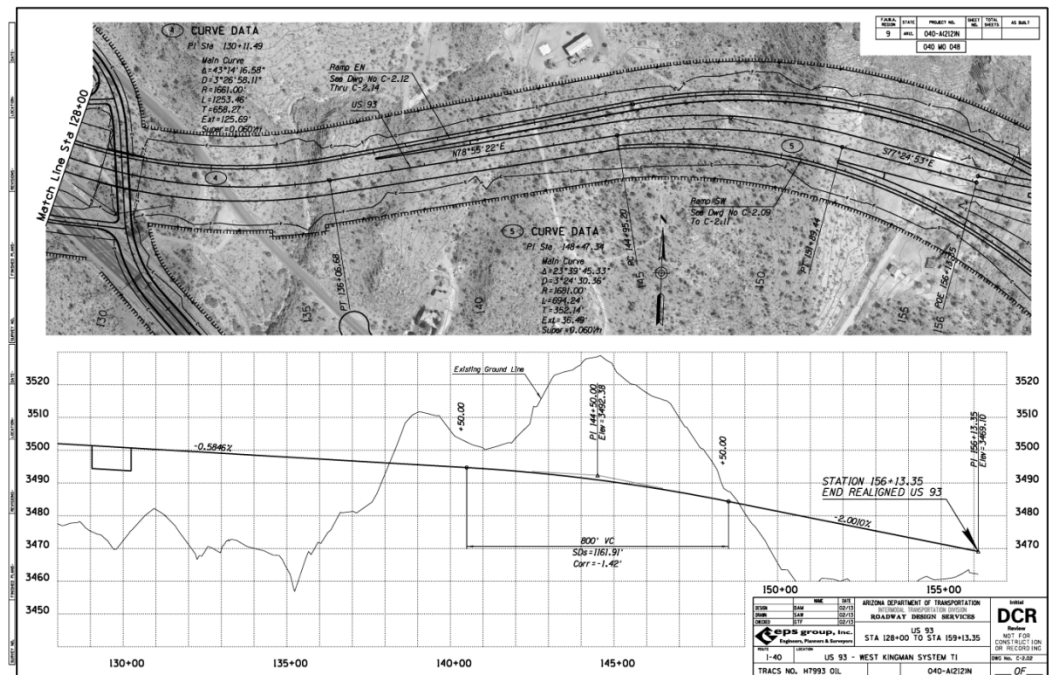
- Alt D1 had greater noise impacts and affected 6(f) property
- Alt J3 had greater visual impacts and had ramps with lower design speeds

The “no-build” alternative does nothing to address the local and regional traffic issues identified and was therefore not recommended.



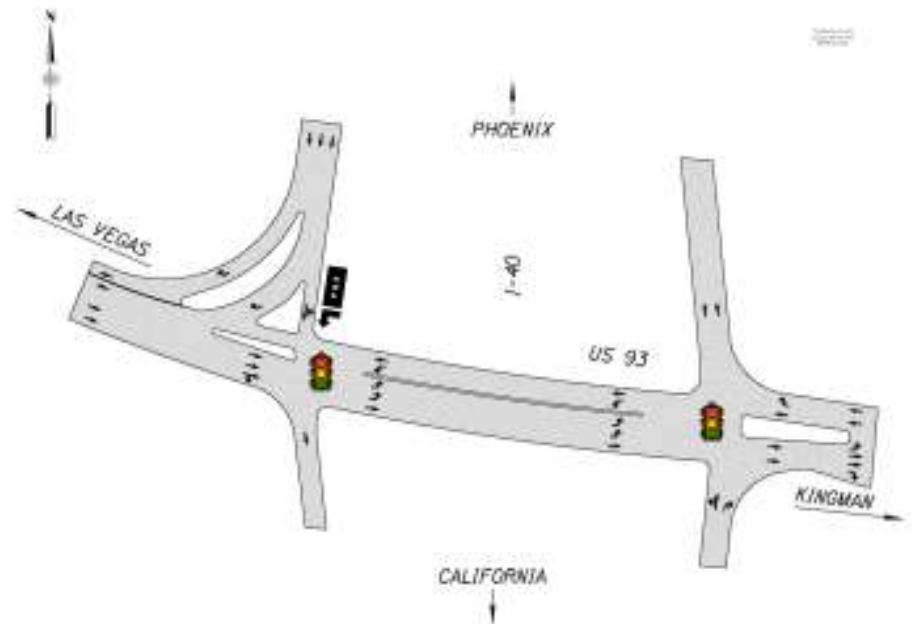
Most Favorable Alignment

- ▶ Preliminary engineering drawings have been prepared for the Most Favorable Alignment.
- ▶ Initial Cost Estimate \$86 million
- ▶ Constructed in 2 phases
 - Phoenix/Vegas movements (\$54.7 Million)
 - California/Vegas movements (\$31.8 million)



Possible Interim Improvements

- ▶ The existing Beale St. Traffic Interchange (TI) experiences operational challenges, including periodic off-ramp congestion that backs up onto I-40.
- ▶ The DCR has considered interim improvements to the existing SI to mitigate congestion at this location:
 - Signal Timing Optimization
 - Free-flow right turn
 - Striping modifications
- ▶ Interim improvements are being evaluated at this time.



Your Input is Important!

Comment Period Ends October 18, 2013

► Submit comments:

- **In Person:** at tonight's meeting
- **Online:** azdot.gov/WestKingmanTI
- **Mail:** c/o West Kingman TI, 1655 W. Jackson, MD 126F, Phoenix, AZ 85007
- **Email:** projects@azdot.gov
- **Phone:** 855.712.8350

Thank you!

**I-40/US 93 West Kingman
System Interchange
Public Information Meeting**